INFO-HAMS Digest Thu, 26 Oct 89 Volume 89 : Issue 810

Today's Topics:

Date: 26 Oct 89 19:56:32 GMT
From: att!cbnewsj!kfr@ucbvax.Berkeley.EDU (k.redden)
Subject: Aviation NAVAIDS (long)

In article <8910260703.AA00903@ucbvax.Berkeley.EDU> MEHARP01@ULKYVM.BITNET (Michael Harpe) writes:
>
> Aviation NAVAIDS are some of the slicker applications of radio
> technology that you will ever find.
>
> ILS - Instrument Landing System. System uses radio signals (I don't
> know what frequency, I think microwave) to generate a glide slope signal
> to landing aircraft.

The ILS is a combination of two transmitters in the VHF band (108 to about 118MHZ). One is positioned a the far end of the runway and is called the localizer. It is used to tell if the aircraft is right or left of the course to the runway.

The second transmitter, called the glide slope, is positioned along side the runway at the point where the aircraft is to touch down. It is used to tell if the aircraft is above or below the proper glide path to the touchdown zone.

Together, the ILS provides a 3-deminsional precision approach to the runway. The marker beacons are separate low power transmitters used to mark specific points along the ILS approach.

>
> DME - Distance Measuring Equipment. Related to VOR. Gives a dead

> reckoning distance to the NAVAID generating the signal.

I beleive the DME uses an active interrogation by the aircraft DME transmitter of the DME system that is co-located at some VORs. By timing the response, the airborne system calculates the distance to the station. This is a measured distance and not a dead reckoning position. Note that when directly overhead the station, the DME will still show the distance (ie the altitude) to the station. I think the DME operates somewhere around 1Ghz (the antenna is about 2 inches long).

Kevin Redden
WB2ZLF

Date: 26 Oct 89 15:32:00 GMT-10:00
From: "NORMAN FUNAMURA" <nfunamura@nuwes-lll.arpa>
Subject: Cellular Phone via T.V.

1. Background--Cellular phones occupy 824-848 Mhz (mobile) and 869-894 Mhz (base). FM is used and channel spacing is 30 Khz. Mobile/Base spacing is 45 Mhz. These frequency bands were formerly occupied by UHF-TV Channels 72-76 and 80-83+. Shouldn't a TV be able to pick up these signals?????

2. Connect an antenna to the UHF terminals of a TV. If a UHF antenna is not available, just use a piece of wire about a foot long with the ends connected to the two UHF terminals.

3. Turn on the TV and turn up the audio gain (TV's use much wider deviation). Slowly tune around channels 80 and 83. Occasional audio should be heard, but because the TV audio section requires a 4.5 Mhz signal, audio will be heard only when two cellular channels about 4.5 Mhz apart are active.

4. A second TV (assuming higher local oscillator and about 45 Mhz IF) could provide the necessary hetrodyne so that the first TV can detect a single incoming signal.

   a. Tune the first TV (with UHF antenna) to channel 82 (80-83).

   b. Bring the second TV as close as possible to the first and slowly tune it around channel 75 (72-76), until audio is heard...or

   c. Retune by small increments...set the first TV, then sweep the second etc.

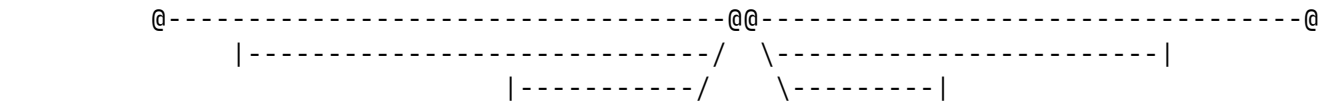
5. DISCLAIMER!!!!! Try this at your own risk......don't know the legalities/illegalities of listening to cellular phones......

73 Norman
KH6R

Date: 27 Oct 89 00:42:54 GMT
From: tomas@apple.com (Tom Taylor)
Subject: Dipole antenna genius wanted...

This past weekend I built a three band dipole antenna for the 40, 30, and 17 meter bands. The antenna is the type with one center and three separate legs, separated by spacers. I tuned the antenna when it was about 5 feet off the ground. The antenna tuned very nicely with low SWR across each band and 1:1 SWR somewhere in the band. Next, I raised the center of the antenna and mounted it near the top of my crank up tower. At this point, the tower was cranked down and the center of the dipole was about 25 feet in the air. Each leg drooped down to about 8 feet in the air. I checked the SWR and found that the 1:1 low point had shifted down in frequency by about 200kHz on the 40 and 30 meter bands (probably expected) and had not changed on 17 meters. After tuning the antenna again to get 1:1 point in the middle of the bands, I cranked up the tower to about 45 feet and raised the ends to about 15 feet. When I checked the SWR, I found that the low point on the 40 and 30 meter bands was no longer 1:1, but about 2:1. Of course, the band edges were at least 3:1 (instead of under 2:1). The SWR on the 17 meter band was still ok. What's the problem? I can understand the SWR low point shifting when the antenna was raised. I can't understand, however, why the SWR low point is no longer low. Can anyone help?

Picture of antenna:



Tom Taylor - AA6BR

Date: Thu 26 Oct 89 21:03:28-CDT
From: ATISD-DOOI.XP@GUNTER-ADAM.AF.MIL
Subject: INFO-HAMS Digest V89 #807

subj: buying equipment cheap overseas
This is in reply to WF2K's question on buying equipment for a good price

overseas----
It aint worth it! First off, the dollar is of such low value these days that you can buy the same gear for less at the discount places here in the USA. Second, the warentee is practically useless...it is almost impossible to get service from the stateside dealers on a Japanese bought rig. Third, many of the rigs overseas are not the same as those sold in the states....for example, on their two meter rigs---they go from 144 to 146.oo MHZ...their band is not the same as ours...I found it fun to look around the ham radio electronics district in Tokyo (called Akie ---harbra)...I bought a few odds and ends, but nothing big....also, buy a Japaneese CQ magazine...it's about an inch and a half thick!!! Its hard (for me) to reed Japanese, but fun to look at the pictures!!!
Have fun,
73,
Marv, WG4Q

Date: 26 Oct 89 21:54:37 GMT
From: uokmax!norlin@apple.com (NARC ONE)
Subject: info on Crystal Radio kit or schematic

In article <758@ccssrv.UUCP> sterling@ccssrv.UUCP (Sterling Huxley) writes:
>
>As a Christmas present I thought I would give my nephew a crystal radio kit.
>I've looked around and can only find a cheap kit from Radio Shack.
>[stuff deleted...]
>Does anyone know where a reasonable kit can be purchased?

The Radio Shack kit is, actually, acceptable. I got one for Christmas when I was nine years old, and it was quite thrilling. To this day, I still have it, and it still works. Only thing you might consider adding on to the kit is a longer antenna. They only provide 10 feet of wire for the antenna, and 10 feet for the ground (at least, when I got mine). It was kind of disheartening at first, because the short antenna did not give enough signal strength to pick up any stations at first, and I was afraid it didn't work. So, my advice is just stick with the Radio Shack kit and buy some antenna wire to go with it, and your nephew should be quite happy.

--
Norman Lin

This is my humble signature file.

Date: 27 Oct 89 00:03:58 GMT

From: sco!stevebe@uunet.uu.net (Steve Beecher)
Subject: Info on KENWOOD TR-2600 A needed!!!

   I have a Kenwood TR-2600 A that I have a couple of questions about. First of all, I was wondering how to use the Telephone Autopatch system for business and/or personal use, i.e. extra licences needed, who I need to contact, how to operate it on my unit, where to find out the frequencies, etc. Is the TU-35B tone unit needed for this? Do I need to buy one, or is it something different entirely. Secondly, I would like to know if there are any mod.s available to increase the scan speed of the TR-2600 A. It is very slow as is stands. Anyone with answers to either of these questions I would appreciate email to me. Thanks!!!!

              Steve Beecher
              Software/Hardware Technician
              Computer Services
              The Santa Cruz Operation
              E-mail: ...!uunet!sco!stevebe   stevebe@sco.COM

Date: Thu, 26 Oct 89 15:19 CDT
From: SURESH KAGOO N9GSA/4S7??? <SKAGOO%MEMSTVX1.BITNET@CORNELLC.cit.cornell.edu>
Subject: KENWOOD TH-75A MOD

TH-75A MARS/CAP MODIFICATION

This modification will allow the TH-75A to transmit from 142 to 152 MHz and 420 to 450 MHz. Specifications are guaranteed for the Amateur Bands only. Through the transceiver will display 136 to 174 MHz and 335 to 512 MHz, the PLL circuit may not lock through the entire range.

CAUTION

Protect your license. Make sure that you operate on authorized frequencies only.

MODIFICATION PROCEDURE
---

1. Disconnect the battery and antenna.

2. Remove the three case screws and two battery plate screws.

3. Lift the front panel from the body of the transceiver, but do not disconnect the two flex cables.

4. Cut the green jumper wire (W1) that is located to the left side of the CPU in the front panel assembly.

5. Assemble the transceiver by reversing steps 1-3.

6. Reset the CPU by holding the M key as the power is turned on.

I have tried it and it works.

Suresh Kagoo N9GSA/4S7??? Memphis State University
Memphis, Tennessee

Internet : SKAGOO@MEMSTVX1.BITNET
Bitnet   : SKAGOO@MEMSTVX1

Date: 27 Oct 89 00:40:26 GMT
From: gem.mps.ohio-state.edu!uwm.edu!ux1.cso.uiuc.edu!ux1.cso.uiuc.edu!phil@tut.cis.ohio-state.edu
Subject: Looking for comments on ham dem

> 1. Remember that they probably don't understand how a flashlight
> works. Demonstrate electric shock: Connect a few 9v batteries in
> series, enough to feel with wet fingers. Use kids holding hands to
> demonstrate series circuits. Demonstrate again using battery,
> lightbulb and switch. Let them play with it for a while.

Definitely **DO**NOT** do this. An electric shock across the heart (such as would be the case in a chain of kids holding hands) can be **FATAL**.

Limit demonstrations of electric shock to where the electric path does NOT involve the heart or other organs. A wet finger and 2 9v batteries might be OK. You might also try touching the tip of your tongue to a single 9v

battery (or lesser voltage from other cells).

Another demonstration you might try is this: take a couple of lantern type batteries in series for 12-24 volts, and attach one end to a tin can with all it's metal exposed. In the other, use a clamp of some sort to hold some thin (30 gauge or so) metal wire. Have a lot of the wire on hand. Touch the wire to the can and see a quick spark and let it fuse to the can. Now the wire will be heating up due to the short and will soon break in the middle after it turns red. Repeat the process in several places on the can and you will soon have a "hairy" can.

--Phil Howard, KA9WGN--
<phil@ux1.cso.uiuc.edu>

Date: 26 Oct 89 23:23:43 GMT
From: attctc!sampson@ames.arc.nasa.gov (Steve Sampson)
Subject: Over-the-horizon Radar (was Re: Radar)

For those interested - The OTH-B Over The Horizon Backscatter radar on the east coast is operational with about 180 degrees of coverage. A west coast system is nearing completion. The final site in the Dakotas will look south 180 degrees. North looking has been a problem due to the Northern lights and otherwise poor propogation. These HF radars use the Ionosphere to bounce the radar pulses in vertical and horizontal sweep. They are very long range and have no short range capability (say inside 200 miles). There are also many portable systems in use by the Navy, while the USAF is only interested in fixed sites. Portable meaning rapidly set up, not small.

Date: 26 Oct 89 21:11:57 GMT
From: m2c!umvlsi!dime!cs.umass.edu@husc6.harvard.edu (DYRK)
Subject: pre-novice seeking equipment advice

> I am seeking some advice from the net about equipment in
> general.
> I am currently studying for my novice exam. I am also finishing
> my dissertation in CS so I have little time to visit clubs etc.
> Just enough time to squeeze in some code practice between
> research and writing diss.
>
> There are various sources that say one should start out with an
> "economy" transceiver (I guess this means the low end Kenwood,
> Yaesu, Icom HF transceivers, CB, SSB, etc. mode, 160 to 10 m,
> 100 or 200 W PEP),
> even though novice priviliges dont allow

one to use it all the features immediately. Buying such a thing would give immediate success which is important for a novice. They are also useful when upgrading.

On the other hand I do like to tinker and build my own equipment. I could not find a kit or something like that for a so called economy transceiver. The only thing is a QRP kit from Heath which definitely does not fall in the above category.

Are there other kits or sets? Should one start with QRP anyways? Is it best to initially forget about building yourself and buying something solid? I'm quite confused.

Thanks for your help,

Dirk Mahling

mahling@cs.umass.edu

Date: 27 Oct 89 00:40:20 GMT
From: gem.mps.ohio-state.edu!wuarchive!uwm.edu!ux1.cso.uiuc.edu!ux1.cso.uiuc.edu!phil@tut.cis.ohio-state.edu
Subject: Radar

> I think not. The Krasnoyarsk site was unfinished, whereas the Russian
> woodpecker has been around for years.

I've heard that it is in fact actually operating, and is simply not fully implemented as their original plans were to have it. I still don't know the specifications. I know that both THEY and WE are using and/or planning to use less obvious spread spectrum.

--Phil Howard, KA9WGN--
<phil@ux1.cso.uiuc.edu>

Date: 26 Oct 89 21:35:00 GMT
From: ux1.cso.uiuc.edu!ux1.cso.uiuc.edu!phil@iuvax.cs.indiana.edu
Subject: Where do YOU buy parts?

> Though I have catalogs for all of the following:
>
> All Electronics
> Amidon Associates

>   Circuit Specialists
>   DC Electronics
>   Digi Key
>   Fair Radio
>   Jameco
>   Newark
>   RadioKit
>   Star Electronics
>   Surplus Sales of Nebraska

Can you post phone numbers (800 numbers preferred)? That way we can all
call them and ask for catalogs and say we heard it on USENET:rec.ham-radio
or INFOHAMS Digest.

--Phil Howard, KA9WGN--
<phil@ux1.cso.uiuc.edu>

Date: 27 Oct 89 00:40:41 GMT
From: cs.utexas.edu!swrinde!gem.mps.ohio-state.edu!uwm.edu!ux1.cso.uiuc.edu!
ux1.cso.uiuc.edu!phil@tut.cis.ohio-state.edu
Subject: Wilson HT

> I have resurrected my old Wilson Mark IV HT after many years of inactivity, and
> find the NICAD battery pack is shot. I tried to call Wilson, but they appear
> to be out of business.
>
> Does anyone out there:
>
>   1.) Have a battery pack they'd be willing to sell ? or,
>   2.) Know where I could get one ? or,
>   3.) Know what became of Wilson Electronics (based in Las Vegas) ?
>
> Thank you for any information you could provide.

Call places like Periphex, W&W Associates, and Mr. Nicad (ads in QST and HR
magazines) and see if they have replacement cells or inserts.

--Phil Howard, KA9WGN--
<phil@ux1.cso.uiuc.edu>

Date: 26 Oct 89 14:58:12 GMT
From: asuvax!stjhmc!f1.n234.z1.fidonet.org!Jim.Grubs@handies.ucar.edu (Jim Grubs)
Subject: Wondering about 455 kHz

> From: jpb@ATHENA.MIT.EDU

> Does anyone out there know how 455 kHz got to be such a popular IF ?
> Why 455, (as opposed to 450 or 500, e.g.)?

So broadcast band images would not fall inside the band.

fall inside the band.

--
Uucp: ...{gatech,ames,rutgers}!ncar!noao!asuvax!stjhmc!234!1!Jim.Grubs
Internet: Jim.Grubs@f1.n234.z1.fidonet.org

End of INFO-HAMS Digest V89 Issue #810
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